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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/900,079
Filing Date: July 06, 2001
Appellant(s): VANDERSLUIS, KIRSTAN ANDERSON

_____
Dale B. Halling
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/18/07 appealing from the Office action

mailed 07/27/07.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings besides the ones contained in the brief which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,581,062	Fernandez	08-2003
6,985,905	Prompt	01-2006

2002/0156811	Krupa	10-2002
5,740,425	Povilus	04-1998

Pickett, Joseph, et al. "The American Heritage College Dictionary" Fourth Ed.,

Houghton Mifflin Company (2002), p. 1419

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

In light of the appellant's respective arguments or respective amendments, the

previous 35 USC § 112 rejections to the claims have been withdrawn.

Claim Rejections - 35 USC § 101

In light of the appellant's respective arguments or respective amendments, some

previous 35 USC § 101 rejections to the claims have been withdrawn.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claim 1 is rejected under 35 U.S.C. 101

because the claimed invention is directed to non-statutory subject matter. The claim

recited a system for converting data in a first hierarchical data scheme into a second

hierarchical data scheme, also the body of the claim merely contains dynamic data

generation module containing data in the first hierarchical data schema, which can be

software module(s). Therefore, the claim is software, program per se and not statutory

(computer programs claimed as computer listing per se, i.e. the descriptions of

expressions of the programs, are not physical "things". They are neither computer

components nor statutory processes, as they are not "acts" being performed.

Claims 2-12, fully incorporating the deficiencies of their respective independent

claim, are likewise rejeected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the appellant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
appellant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 1-3, 5-11, and 13-17 rejected under 35 U.S.C. 102(e) as being

anticipated by Fernandez et al. (US 6604100) (hereafter Fernandez).

Regarding claim 1, Fernandez discloses: A system for converting a first

hierarchical data scheme into a second hierarchical data scheme, comprising (see the

abstract, Fernandez):

a template defining the second hierarchical data scheme, wherein a hierarchical data schema is a scheme that groups data and its context (i.e., XML construction part, e.g., XML template, col. 5, line 29, Fernandez)

a dynamic data generation module (106, fig. 1) contained in the template (i.e. XML template in fig. 1, i.e., the XML generator module 106, merges the tuple streams with the XML construction part, col. 5, lines 42-45, Fernandez); and

a data source (110, fig. 1), in communication with the dynamic data generation module, containing data in the first hierarchical data scheme (relational database 110, fig. 1, Fernandez).

Regarding claim 2, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Fernandez discloses: wherein the template and the dynamic data generation module are contained in a server (server 110, fig. 1, Fernandez).

Regarding claim 3, all the limitations of this claim have been noted in the rejection of claim 2. In addition, Fernandez discloses: further including a driver connected between the dynamic data generation module and the data source (i.e., the translator 104 takes a source description, which is an XML document specifying systems information needed to contact the source: the protocol JDBC the connection string and source specific query driver, col. 9, lines 66 to col. 10, line 4, Fernandez).

Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Fernandez discloses: wherein the template is a static extensible markup language document (col. 5, lines 43-44, Fernandez).

Regarding claim 6, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Fernandez discloses: wherein the template is an extensible markup language document type definition (col. 4, lines 1-25, Fernandez).

Regarding claim 7, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Fernandez discloses: wherein the template is an extensible markup language schema (XML template, col. 5, line 29, Fernandez).

Regarding claims 8 and 9, all the limitations of these claims have been noted in the rejection of claim 1 above. In addition, Fernandez discloses: wherein the first and the second hierarchical data scheme are selected from the group of: extensible markup language schemes, relational databases, non-relational database, extensible markup language databases, and self-describing databases (see abstract, Fernandez).

Regarding claim 10, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Fernandez discloses: wherein the dynamic data generation module includes a query directed to the data source (i.e., the query composer module 102, col. 5, lines 18-25, Fernandez).

Regarding claim 11 all the limitations of this claim have been noted in the rejection of claim 1. In addition, Fernandez discloses: wherein the dynamic data generation module includes a data mapping between the first hierarchical data scheme

and the second hierarchical data scheme (i.e., mapping relation databases to XML

views, col. 2, lines 42-51, Fernandez).

Regarding claim 13, most of the limitations of this claim have been noted in the

rejection of claim 1. In addition, Fernandez discloses:

a) publishing a dynamic template in a server (col. 4, lines 65 to col. 5, lines 8,

Fernandez);

b) receiving an instruction from a client at the dynamic template (i.e., applications

provide user queries in XML-QL, a query language specifically designed for XML,

XML_QL queryies contain a where clause followed by a construct clause, col. 8, lines

37-67, Fernandez);

c) executing the dynamic template (i.e., the query composer module 102

(executable) takes a user query and the RXL view query and generates a new RXL

query, col. 9, lines 15-35, Fernandez); and

d) when a dynamic data generation module is executed, performing a data

transfer operation that converts data in the first hierarchical data scheme into the

second hierarchical data scheme (i.e., the translator 104 takes an RXL query and

decomposes it into one or more SQL queries, and an XML template, the SQL queries

are executed by the RDBMS 110, server or engine, and their flat results are converted

into XML by the XML generator 106, col. 9, lines 60-65, Fernandez).

Regarding claim 14, most of the limitations of this claim have been noted in the

rejection of claim 13. In addition, Fernandez discloses: wherein step (a) further includes

the steps of:

a1) receiving a template (i.e. querying relational data in the XML, col. 3, lines 10-12, Fernandez);

a2) determining for each element of the template if dynamically generated data is required (i.e., in XML an attribute with type ID contains a value that uniquely identifies the element in the document, i.e. a key. In RXL the distinguished attribute ID always has type ID and its value is a skolem term, which is used to control grouping and element creation, col. 6, lines 48-52, Fernandez);

a3) when the dynamically generated data is required, receiving a data source for obtaining the dynamically generated data (generated XML data with complex structure and with arbitrary levels of nesting…transformations from the relational store to the XML view, col. 3, lines 30-35, Fernandez).

Regarding claim 15, most of the limitations of this claim have been noted in the rejection of claim 13. In addition, Fernandez discloses: further including the steps of:

a4) receiving a data mapping between the first hierarchical data scheme and the second hierarchical data scheme, (col. 2, lines 44-47, Fernandez).

Regarding claim 16, most of the limitations of this claim have been noted in the rejection of claim 15. In addition, Fernandez discloses:

i) when the first hierarchical data schema is a non-extensible markup language (relational database 110), and the second hierarchical data schema is a second non-extensible markup language (i.e. relational schema, col. 7, lines 55 to col. 8, lines 16, Fernandez) creating a first data mapping between the first hierarchical data schema and an intermediate extensible markup schema (col. 10, lines 7-20);

ii) creating a second data mapping between the intermediate extensible markup

schema and the second hierarchical data schema (col. 10, lines 7-20).

Regarding claim 17, most of the limitations of this claim have been noted in the

rejection of claim 15. In addition, Fernandez discloses: further including the step of"

a5) receiving a key associated with the data mapping (col. 10, lines 2-27,

Fernandez).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Fernandez et al. (US 6581062) (Fernandez) in view of Prompt et al. (6985905)

(hereafter Prompt).

Regarding claim 4, all the limitations of the claim have been noted in the rejection

of claim 3. However, Fernandez didn't disclose: further including a developer module

contained in the server for creating the dynamic data generation module. On the other

hand, Prompt discloses: further including a developer module contained in the server for

creating the dynamic data generation module (col. 46, lines 60 to col. 47, lines 6,

Prompt). Thus, at the time the invention was made, it would have been obvious to a

person of ordinary skill in the art to include a developer module contained in the sever

for creating the dynamic data generation module in the system of Fernandez as taught

by Prompt. The motivation being to include mapping relational database objects and

logical relationships to virtual directory entries that are configured to communicate all

respects of the virtual directory structure of the network to the client application.

Regarding claim 12, all the limitations of this claim have been noted in the

rejection of claim 4. In addition, Fernandez/Prompt discloses: wherein the developer

module contains a wizard that walks a user through a process of creating the dynamic

data generation module (col. 46, lines 35-45, Prompt).

Claims 18-23 and 25-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fernandez et al. (US 6604100) (Fernandez) in view of Krupa (US

20020156811).

Regarding claims 18 and 26, all the limitations of these claims have been noted

in the rejection of claims 14 and 15 above. However, Fernandez didn't disclose:

repeating steps. On the other hand, Krupa discloses: steps (b) through (d) for every

element of the static extensible markup language template to form a dynamic data

conversion program (i.e., customer is repeating, paragraph [0031]). Thus, at the time

the invention was made, it would have been obvious to a person of ordinary skill in the

art to include repeating steps in the system of Fernandez as taught by Krupa. The

motivation being to provide a of forming a relational database, the method includes

mapping a corresponding unique key to each tree component of an XML document and a possibility of repeating (paragraphs [0014]-[0015], Krupa).

Regarding claim 19, all the limitations of this claim have been noted in the rejection of claims 6 and 7 above. It is therefore rejected as set forth above.

Regarding claims 20 and 27, all the limitations of these claims have been noted in the rejection of claims 14 and 15 above, respectively. In addition, Fernandez/Krupa discloses: wherein step (a) further includes the step of:

a1) defining an input parameter (col. 5, lines 64 to col. 6, lines 10 Fernandez).

Regarding claim 21, all the limitations of this claim have been noted in the rejection of claim 18. In addition, Fernandez/Krupa discloses: wherein step (c) further includes the step of:

c1) receiving a driver (col. 5, lines 30-35, Fernandez).

Regarding claim 22, all the limitations of this claim have been noted in the rejection of claim 18. In addition, Fernandez/Krupa discloses: wherein step (c) further includes the step of:

c1) generating a query to the data source (col. 5, lines 30-35, Fernandez).

Regarding claim 23, all the limitations of this claim have been noted in the rejection of claim 18. In addition, Fernandez/Krupa discloses: wherein step (d) further includes the step of:

d1) receiving a screen (XML view) having a list of elements from the data source and a list of metatags from the static extensible markup language template col. 5, lines 63 to col. 6, line 10, Fernandez).

Regarding claim 25, all the limitations of this claim have been noted in the rejection of claim 18. In addition, Fernandez/Krupa discloses: further including the steps of:

e) publishing the dynamic data conversion program to a server (col. 5, lines 45-55, Fernandez);

f) when a query is received at the server for the dynamic data conversion program, executing the dynamic data conversion program to form an extensible markup language document (col. 9, lines 61-65, Fernandez).

Regarding claim 28, all the limitations of this claim have been noted in the rejection of claim 26 above. In addition, Fernandez/Krupa discloses: wherein step (d) further includes the steps of:

d1) receiving a query type (XML-QL, col. 5, lines 63 to col. 6, lines 10, Fernandez);

d2) generating a query (102), fig. 1 and corresponding text, Fernandez).

Regarding claim 29, all the limitations of this claim have been noted in the rejection of claim 28 above. In addition, Fernandez/Krupa discloses: wherein step (d1) further includes receiving an insert query type (col. 8, lines 39-44, Fernandez).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandez, et al. (US 6604100) (Fernandez) in view of Krupa (US 20020156811) and further in view of Povilus (US 5740425).

Regarding claim 24, all the limitations of this claim have been noted in the rejection of claim 18 above. However, Fernandez/Krupa didn't disclose: wherein step (c) further includes the step of: displaying an incomplete version of a dynamic extensible markup language template wherein a static element is shown in a first color and a dynamic element is shown in a second color. On the other hand, Povilus discloses: wherein step (c) further includes the step of: displaying an incomplete version of a dynamic extensible markup language template wherein a static element is shown in a first color and a dynamic element is shown in a second color (col. 32, lines 45-67, Povilus). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the steps for displaying an incomplete version of a dynamic extensible markup language template wherein a static element is shown in a first color and a dynamic element is shown in a second color in the system of Fernandez/Krupa as taught by Povilus. The motivation being to enable the users to clearly see the different elements in the templates and easily map information when converting the information between the templates, so, it can easily be shared between data sources (col. 32, lines 42-67, Povilus).

(10) Response to Arguments

Appellant's arguments filed December 18th, 2007 with respect to Claims 1-29 have been fully considered but they are not persuasive.

As to Appellant's arguments with respect to Claims 1-12 for the claims allegedly being statutory under 35 U.S.C. 101, the examiner respectfully disagrees. The system

of Claims 1-12 claims no definitive hardware components. As such, it is broad enough

to read on a mere software program. Therefore, the system of Claims 1-12 is a

software program per se and is non-statutory.

Summary of Fernandez

Fernandez takes input queries in the XML-QL language, creates RXL queries

from the XML-QL queries, creates SQL queries to access a relational database

(RDBMS) to respond to the queries, the results of the queries are put into an newly

generated XML document according to a template and the results are returned to the

user/application as XML. Essentially, Fernandez provides an XML hierarchical layout

for a relational database at least when responding to queries. Fernandez, col. 5, lines

10-56 generally provide the same teachings as the summary above and Fernandez,

Fig. 1 aids in understanding the general invention of Fernandez as described in the

summary above.

It should be noted that Fernandez considers the phrases "XML construction part"

and XML Template as synonymous (Fernandez, col. 5, line 29). Silkroute and the XML

Template can also be construed as being synonymous since they share the same detail

in Fig. 1 (as per MPEP 2125).

As to Appellant's arguments with respect to Claim 1 for the prior art(s) allegedly

not teaching or suggesting "a dynamic data generation module contained in the

template," the examiner respectfully disagrees. Fernandez, Fig. 1, detail 106 (XML

generator module) with Fernandez, Fig. 1, detail 100 (XML Template) with Fernandez

col. 5, lines 42-45 were used to reject this limitation. XML is a form of data. The XML

generator module 106 generates XML data (Fernandez col. 5, lines 42-45). This

module is dynamic in that its output varies on what is given to it as input (at least by

what tuple streams are given to it). Since the input is dependent on user/application

queries (Fig. 1, detail 120), the module's input and outputs change quite frequently.

From the figure alone (and considering MPEP 2125) it is easy to see the XML

Generator module 106 clearly contained within the XML Template 100. As such, the

prior art(s) appear to teach the claimed limitations as claimed.

As to Appellant's arguments with respect to Claim 5 for the prior art(s) allegedly

not teaching or suggesting "the template is a static extensible markup language

document," the examiner respectfully disagrees. A dictionary definition of "template" is

included with this Brief. This dictionary definition teaches that a template is "a

document or file with a preset format, used as a starting point for a particular

application" (emphasis added). Preset format means that before being used, the

document or file had a structure. Therefore, before it was used, it was static (preset).

Essentially, a template by its very nature is static. Since Fernandez uses an eXtensible

Markup Language (XML) template document (a template by its very nature) and the

examiner is using the broadest reasonable interpretation of the claimed terminology,

Fernandez's XML Template appears to be static. The prior art(s) appear to teach the

claimed limitations as claimed.

As to Appellant's arguments with respect to Claim 10 for the prior art(s) allegedly not teaching or suggesting "the dynamic data generation module includes a query," the examiner respectfully disagrees. Fernandez, Fig. 1, detail 102 (the query composer module) with Fernandez, col. 5, lines 18-25 were used to reject this limitation of Claim 10. As seen from the figure, included with the XML generator module 106 (the dynamic data generation module) is the query composer module 102. This module makes executable queries as per Fernandez, col. 5, lines 18-25. As such, included with the dynamic data generation module is at least a query since output from the query composer module 102 is at least a query and the query composer module 102 is included with the dynamic generation module 106. The prior art(s) appear to teach the claimed limitations as claimed.

As to Appellant's arguments with respect to Claim 11 for the prior art(s) allegedly not teaching or suggesting "the dynamic data generation module includes a mapping between the first hierarchical data scheme and the second hierarchical data scheme," the examiner respectfully disagrees. Fernandez, col. 2, lines 42-51 (mapping relational databases to XML views) was used to rejection this limitation. First, as stated in Fernandez's abstract, Fernandez converts relational data to XML. This conversion process alone requires a mapping function. As such, since Fernandez converts data dynamically (according to user queries) the dynamic data generation module in Fernandez (XML generator module) must include with it a mapping between the data schemes in order to correctly respond to queries. Second, if the first evidence was not enough, Fernandez explicitly teaches "mapping relational databases to XML views."

This sounds like a mapping between a first and second hierarchical data schemes that must be included with the dynamic data generation module (XML generator module 106) since the XML generator module is responsible for converting the RDBMS results (tuple streams) into at least an XML document (Fernandez, col. 5, lines 41-45). As such, for many reasons, the prior art(s) appear to teach the claimed limitations as claimed.

As to Appellant's arguments with respect to Claim 13 for the prior art(s) allegedly not teaching or suggesting "a dynamic template," the examiner respectfully disagrees. Fernandez, cols. 4-5, lines 65-8 was used to reject the associated limitation. Silkroute/XML template/XML construction part change according to the user input (Fernandez, col. 5, lines 26-29). The template is preset (static), but this is done according to the query submitted (e.g. a template is created (preset) according to a query for use in responding to the query, then the template is filled in with the results of the query). This template must be published (its creation is made known) on the server doing the work in responding to the query or else the template is never used and subsequently, the query is never answered to correctly.

As to Appellant's arguments with respect to Claim 14 for the prior art(s) allegedly not teaching or suggesting "determining for each element in the template if dynamically generated data is required," the examiner respectfully disagrees. Fernandez, col. 6, lines 48-52 was used to rejection this limitation because "...in XML an attribute with type ID contains a value that uniquely identifies the element in the document, i.e., a key. In RXL the distinguished attribute ID always has type ID and its value is a skolem term,

which is used to control grouping and element creation." Fernandez can been seen as determining for each element in the template if dynamically generated data is required since Fernandez responds to queries dynamically. In the citing, skolem terms are used, inter alia, to control/determine element creation in responding to a query. Fernandez, col. 10, lines 14-22 can be seen as possibly teaching this limitation better since, in this citing, Fernandez teaches a generated static template containing variables to be filled in dynamically by responding to the query. "…the variables $pid and $item refer to the attributes pid and item in the SQL query's select clause." This, along with the fact that Fernandez teaches that query tuple results are merged with the template/constructor (Fernandez, col. 5, lines 41-45) teaches that for each variable element in the template, it is determined if dynamically generated data is required, or if more dynamically generated data is required to answer the query(ies).

As to Appellant's arguments with respect to Claims 13 and 14 for the prior art(s) allegedly not teaching or suggesting "that the XML-construction part is executable in Fernandez," the examiner respectfully disagrees. As noted above, the XML-construction part is considered as being synonymous to the XML template/Silkroute. Besides, Fernandez, col. 4, line 66 teaching that Silkroute in middleware (inherently executable), Fernandez's XML template includes variables, as shown above, that must be executed in some form in order to obtain the result of the query and fill in the template (much like Fernandez, col. 6, lines 13-14).

As to Appellant's arguments with respect to Claims 18 and 26 for the prior art(s) allegedly not teaching or suggesting "determining for each element if a datum needs to

be dynamically generated," the examiner respectfully disagrees. The argument above

with respect to Claim 14 alone seems to respond well to this argument.

The other claims argued merely because of a dependency on a previously

argued claim(s) in the arguments presented to the examiner, filed December 18th, 2007,

are moot in view of the examiner's interpretation of the claims and art and are still

considered rejected based on their respective rejections from at least a prior Office

action (part(s) recited again above).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/BRENT STACE/

Examiner, Art Unit 2161

Conferees:

/Apu M Mofiz/

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